AMENDMENTS TO THE SPECIFICATION

Please amend paragraph **[0005]** as follows:

One conventional method for manufacturing an LED surrounded by a conversion material region is to mount the LED in a cup shaped submount with the necessary electrical connections to apply a bias to the LED. A syringe mechanism is filled with an optically clear and curable material (e.g. epoxy, ~~silicon~~ silicone, sol gel, etc.) with the conversion material mixed in the material, where the conversion material typically includes phosphor particles. The syringe mixture is then injected into the submount, covering the LED and partially filling the submount. When the clear material is first injected into the cup, the conversion particles are generally uniformly mixed/suspended throughout the material. The clear material is then cured to form the conversion material region and the entire assembly is encased in a clear epoxy.

Please amend paragraph **[0006]** as follows:

One disadvantage of this manufacturing method is that under certain circumstances the conversion particles can be non-uniformly distributed in the cured state. After the clear material mixture is injected into a cup, there can be a time delay before it is cured. During this delay, the conversion particles can settle toward the base of the cup and over the LED such that there are different concentrations of particles throughout the conversion material region. This settling problem can be compounded in clear materials that ~~dehydrate~~ become less viscous during the curing process, which allows the

conversion particles to settle more quickly. The settled conversion material region can result in light from the emitter appearing as different colors ~~and/or intensities~~ when viewed from different angles because the emitted light encounters different amounts of conversion material.

Please amend paragraph **[0033]** as follows:

As shown, light source 12 includes a single light emitting diode (LED). However, light source 12 can include other light emitters, such as a solid-state laser, a laser diode, an organic light emitting diode, among others. The desired wavelengths of interest typically range from the infrared to the ultraviolet regions~~, although other wavelengths could be used~~. Further, light source 12 can include multiple light sources which emit light at the same or different wavelengths.

Please amend paragraph **[0046]** as follows:

Another advantage is that conversion material region 21 does not generally contact light source 12, so variations in the surface or shape of light source 12 will not significantly impact the performance of emitter 10. Further, heat can damage <u>or reduce the efficiency of</u> conversion particles 22 if conversion material region 21 is positioned too close to light source 12.

Please amend paragraph **[0049]** as follows:

Conversion particles 22 are distributed throughout conversion material region 21. However, conversion material

region 21 includes only a portion of lens 36. In particular, conversion particles 22 are distributed throughout inside layer 38 and preferably not within outside layer 40. Hence, inside layer 38 can include clear material mixed with conversion particles 22 and outside layer 40 can include clear material. In this arrangement, light emitted at different angles from light source 12 passes through nearly the same thickness of lens 36 and the same amount of conversion particles 22[[.]] (i.e. light paths 1, 2, and 3 are substantially equal).

Please amend paragraph **[0050]** as follows:

By forming lens 36 in the shape of a dome, an inside distance 42 (See FIG. 4) can be maintained between light source 12 and inside layer 38 and conversion particles 22, with distance 42 being optimized for the particular light source 12 and submount 14. The optimum value for distances 42 and thickness 44 depends on the type and dimensions of light source 12 and submount 14. Distance 42 is chosen to allow for light source 12 to provide a higher intensity of light without exposing the conversion particles to ~~generating~~ excessive heat which can damage or reduce the efficiency of conversion particles 22. ~~Heat can damage conversion particles 22 if conversion material region 21 is positioned too close to light source 12.~~

Please amend paragraph **[0051]** as follows:

Distance 42 can also affect the light efficiency of emitter 30. When ~~directional~~ light from light source 12 passes into inner layer 38 ~~and is redirected back towards light source 12~~, a

portion of the directional light can be absorbed by conversion particles 22 and re-emitted omnidirectionally. If distance 42 is too small or if conversion particles 22 are positioned directly on light source 12, then the probability that some of the re-emitted light can be directed back into and absorbed by light source 12 is increased. The absorption of this light can reduce the overall light emitting efficiency of emitter 30 ~~because it can increase the temperature of light source 12~~. If distance 42 is too large, then thickness 44 can be reduced to a point that light from conversion particles 22 can be trapped in lens 36 by total internal reflection, which also reduces the overall efficiency of emitter 30.

Please amend paragraph **[0062]** as follows:

Instead of having a lens, emitter 130 includes a phosphor loaded cap 136 having the same basic shape as LED 152 and, preferably, having a generally consistent thickness. Cap 136 can be made of a similar material as the lenses described above and can include conversion particles distributed ~~thoughout~~ throughout. Cap 136 can be manufactured separately from LED 152 by the same methods as the lenses described above, one method being injection molding. Cap 136 can be mounted in place over LED 152 with ~~an~~ a transparent epoxy or another similar material.

Please amend paragraph **[0069]** as follows:

The method can also include intermediate steps of testing the emitter before [[it]] the cap is bonded to the LED. If either the cap or the LED are found to be defective, then the defective part can be discarded and replaced with a different

part. The testing can be repeated until the emitter emits light at a sufficient color and intensity over a range of viewing angles before the cap is bonded to the LED.